Abstract

Disclosed is a nonvolatile ferroelectric FeRAM control device which allows a programmable register to be stably driven in a low voltage region by controlling a pumping voltage supplied to the register. A pumping voltage controller is configured to output a pumping voltage control signal by receiving a power voltage control signal having a different output level according to a power voltage region where a power voltage belongs when the power control signal is applied. A cell plate voltage controller is configured to selectively output a cell plate pumping voltage control signal depending on states of the power voltage control signal, when a cell plate control signal is applied. A write enable voltage controller is configured to selectively output a write enable pumping voltage control signal depending on states of the power voltage control signal, when a write enable control signal is applied. A register array including a plurality of unit registers is configured to boost and output voltage levels of data stored in a nonvolatile ferroelectric capacitor depending on voltage levels of the pumping voltage control signal, the cell plate pumping voltage control signal and the write enable pumping voltage control signal.